

REMARKS

In the outstanding Office Action, all claims pending in the application were subjected to a Restriction Requirement. An Election Requirement was also set forth, for election of two species to which the claims would be restricted if no generic claim were finally held to be allowable.

By this response, the restriction requirement is traversed, a provisional restriction to one claim group is made, and a provisional election of two species is also made.

Restriction Requirement Summary

The Examiner has required restriction to a single invention under 35 U.S.C. 121. The Examiner asserts that the process as claimed can be practiced by another and materially different apparatus than that also claimed. The inventions are set forth in the Office Action as follows:

Claim Group I, claims 1 – 46, 83, and 84, asserted to be drawn to a method, classified in class 239, subclass 2.1.

Claim Group II, claims 47 – 82, asserted to be drawn to an apparatus, classified in class 239, subclass 14.1.

Response

Applicants provisionally elect to continue prosecution of Claim Group I, claims 1 – 46, 83, and 84, drawn to a method, and traverse the Examiner's restriction requirement for the following reasons.

In paragraph 2 of the Office Action, the Examiner indicates that claim groups I and II are

related as process and apparatus for its practice. However, the Examiner avers that the process as claimed can also be practiced by another and materially different apparatus which does not require a chamber. Applicants respectfully traverse this statement.

According to the present disclosure, a chamber is configured for providing an element flow stream of a seeding material containing uncharged seeding particulate elements having predetermined size in a predetermined amount to a charger. It should be understood that any other apparatus designed for seeding electrically charged material must have some means for providing uncharged material to a charger unit for charging. These means should have a certain collecting chamber (that may, for example, be a vessel or hopper), which is adapted for collecting uncharged seeding material before charging, although the configuration of this collecting chamber may not be suitable for providing seeding particulate elements having predetermined size in a predetermined amount, as required by the present invention. Therefore, an apparatus which does not include a chamber cannot provide particulate seeding elements having predetermined size in a predetermined amount, as recited in the present method.

The present disclosure may be distinguished not for the presence or absence of a chamber, but rather for the operation of various units of the apparatus, which can be coupled to the chamber, and which operate in accordance with the method of the present disclosure. The present disclosure describes various apparatus units such as a fan for controllably enhancing the element flow stream, a suction device for the facilitation of receiving the input air flow stream, a feeder for allowing the introduction of a raw material into the chamber, a burner for burning the raw material, and a mixer for mixing the air flow stream with a particulate material derived from the raw material.

Accordingly, the presently disclosed method includes such steps as: "providing a predetermined amount of a seeding material having uncharged seeding elements of a predetermined size distribution; and electrically charging the uncharged seeding elements so as to produce charged seeding elements having a predetermined polarity and charge magnitude," steps which again correspond to the claimed apparatus.

Also, as recited in the independent method claims, the predetermined polarity and charge magnitude is calculated by using a collision model describing collisions between the charged seeding elements and the atmospheric water droplets. Contrary to the Examiner's observations, Applicants submit that the process for controlling atmospheric conditions of the present application cannot be practiced without the apparatus of the present invention, since the apparatus of the application includes all the required parts which are dedicated for the purpose of the method of the present invention. Thus, as recited in claim 47, the apparatus, *inter alia*, includes a chamber configured for providing uncharged seeding elements having a predetermined size; a charger for charging the uncharged seeding elements to a predetermined polarity and charge magnitude; and a control module for controlling operation of the apparatus on the basis of a collision model describing collisions between the charged seeding elements and the atmospheric water droplets.

According to the present disclosure, the desired values of the sizes of the seeding elements, the charges, polarity and amount of the elements are calculated by using the collision model. This model enables to find optimal values for the parameters of the seeding elements, depending on the size distribution, and concentration of the atmospheric droplets.

For the above reasons, the Examiner's Restriction Requirement is traversed, and Examination

of all pending claims is respectfully requested.

Election Requirement Summary

The Examiner has further required election of two species under 35 U.S.C. 121 for prosecution on the merits, to which the claims shall be restricted if no generic claim is finally held to be allowable. The species are set forth in the Office Action as follows:

Election 1: Species A, figure 6A;
 Species B, figure 6B;
 Species C, figure 6C;
 Species D, figure 6D;
 Species E, figure 6E;
 Species F, figure 6F.

Election 2: Species a, figure 15A;
 Species b, figure 15B;
 Species c, figure 15C;
 Species d, figure 15D;

The Examiner asserts that claims 1, 23, and 47 are generic to these species.

Response

In response to the previously-discussed Restriction Requirement, Applicants have provisionally elected the method claims for prosecution on the merits. Thus, if the above Restriction Requirement is deemed proper and made final, it is submitted that the present Election Requirement, drawn to differences in apparatus features, is rendered moot.

However, should the Examiner agree not to restrict the claims, as requested in the above traversal, or should the Examiner nevertheless require election of an apparatus configuration for examination of the method claims, then applicants provisionally elect species C and b, including the apparatus of figure 6C and the electrode configuration of figure 15b, for prosecution on the merits. Applicants provisionally identify claims 1 – 47, 49, 54 - 56, 64 - 66, 68 - 72, 74 - 76, 78, and 80 – 84 as readable on the elected species.

It is noted that this provisional election of species is made without prejudice, disclaimer, or traverse.

Rejoinder

Applicants respectfully remind the Examiner that upon the allowance of a generic claim, Applicants will be entitled to consideration of additional species which include all the limitations of an allowed generic claim.

CONCLUSION

In light of the foregoing, Applicants respectfully request that the Examiner continue to

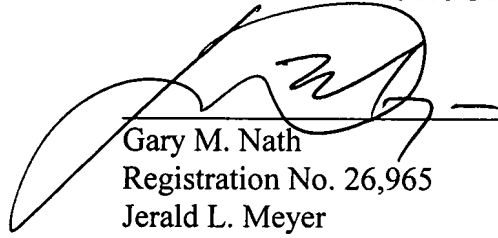
conduct a substantive examination of the application. If the Examiner has any questions or comments regarding this matter, the Examiner is welcomed to contact the undersigned attorney at the below-listed number and address.

In the event this paper is not timely filed, Applicants petition for an appropriate further extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

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